MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name Ch149A

Use of the preparation Inkjet printing.

Version # 02

Revision date 03-02-2009

CAS # Mixture

Synonym(s) ColorSpan 0900992-304

Company identification

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Date prepared Mar 01, 2009

MSDS number 343431

2. Hazards Identification

Emergency overview Harmful by inhalation and in contact with skin. Irritating to eyes and skin.
Allergic reactions are possible.

Acute health effects

Skin contact Contact causes skin irritation. Avoid contact with the skin.

Eye contact Causes eye irritation. Avoid contact with eyes.

Ingestion May be harmful if swallowed.

Potential health effects

Routes of exposure Potential routes of exposure under normal use conditions are skin, eye contact and inhalation.

3. Composition / Information on Ingredients

Component/substance	CAS number	% by weight
2-butoxyethylacetate	112-07-2	25-40
Cyclohexanone	108-94-1	10-25
2-methoxy-1-methylethylacetate	108-65-6	5-10
Acetic Acid, Vinyl Ester, Polymer With Chloroethene	9003-22-9	1-2.5

4. First Aid Measures

First aid procedures

Eye contact In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Skin contact In case of contact, immediately remove contaminated clothing and flush skin with copious amounts of water. Get medical attention.
Wash clothing separately before reuse.

Inhalation In case of accident by inhalation: remove casualty to fresh air and keep at rest. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention immediately.

Ingestion Rinse mouth out with water. Give several glasses of water. Never give anything by mouth to an unconscious person. Do not induce vomiting.
Get medical attention immediately.

5. Fire Fighting Measures

Flash point and method 163.4 °F (73 °C) Closed Cup

Extinguishing media

Suitable extinguishing media Dry chemical, CO2, sand, earth, water spray or regular foam.

Protection of firefighters

Protective equipment and precautions for firefighters Firefighters should wear full protective clothing including self contained breathing apparatus.
Cool containers with flooding quantities of water until well after fire is out.
Avoid runoff into storm sewers and ditches which lead to waterways.

6. Accidental Release Measures

Personal precautions Avoid inhalation of vapors or mists. Avoid contact with skin.
Do not touch or walk through spilled material.
Wear appropriate protective equipment and clothing during clean-up.

Environmental precautions Do not flush into surface water or sanitary sewer system.

Methods for cleaning up Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Clean up in accordance with all applicable regulations. Ventilate the contaminated area. Eliminate ignition sources including sources of electrical, static or frictional sparks.

7. Handling and Storage

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists of this product. Use personal protective equipment as required. Use only with adequate ventilation. When using, do not eat, drink or smoke.

Storage Keep tightly closed in a dry, cool and well-ventilated place. Store at room temperature. Keep away from heat, sparks and flame. Keep away from oxidizers.
Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components	Type	Value
2-butoxyethylacetate (112-07-2)	TWA	20 ppm
Cyclohexanone (108-94-1)	STEL	50 ppm
	TWA	20 ppm

U.S. - OSHA

Components	Type	Value
Cyclohexanone (108-94-1)	PEL	200 mg/m3 50 ppm
	TWA	100 mg/m3 25 ppm

Personal protective equipment

Eye / face protection Wear safety glasses; chemical goggles (if splashing is possible). Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Skin protection Wear appropriate chemical resistant clothing.
Wear appropriate chemical resistant gloves.

Respiratory protection Use personal protective equipment as required.
Provide adequate ventilation.

General hygeine considerations	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Launder contaminated clothing before reuse.

9. Physical & Chemical Properties

Color	Black
Odor	fruity solvent.
Odor threshold	Not available.
Physical state	Liquid.
Form	Liquid.
pH	Not available.
Melting point	Not available.
Freezing point	Not available.
Boiling point	284 - 392 °F (140 - 200 °C)
Flash point	163.4 °F (73 °C) Closed Cup
Evaporation rate	0.05 - 0.5 BuAc
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	> 1
Specific gravity	0.95 - 0.99 (@25 C)
Relative density	Not available.
Solubility (water)	0.5 g/g
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	885 g/L
Viscosity	6 - 15 cP

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under normal storage conditions.
Conditions to avoid	Avoid high temperatures.
Incompatible materials	This product may react with strong oxidizing agents. Reacts with air to form peroxides.
Hazardous decomposition products	peroxides.

11. Toxicological Information

Sensitization

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (108-94-1)	Can be absorbed through the skin.

Local effects	Harmful by inhalation and in contact with skin. Contact with skin and eyes may result in irritation. Repeated or prolonged inhalation may cause toxic effects. Inhalation of high vapour concentrations can cause CNS-depression and narcosis.

Carcinogenicity

IARC Monographs on Occupational Exposures to Chemical Agents: Evidence of carcinogenicity in humans

Acetic Acid, Vinyl Ester, Polymer With Chloroethene (9003-22-9)	No data.
Cyclohexanone (108-94-1)	No data.

US ACGIH Threshold Limit Values: A3 carcinogen

2-butoxyethylacetate (112-07-2)	Group A3 Confirmed animal carcinogen with unknown relevance to humans.
Cyclohexanone (108-94-1)	Group A3 Confirmed animal carcinogen with unknown relevance to humans.

Symptoms and target organs Major effects of exposure: Skin disorders, Allergic reactions.

Target Organs (NIOSH)

2-butoxyethylacetate (112-07-2)	Blood
2-butoxyethylacetate (112-07-2)	Central Nervous System
2-butoxyethylacetate (112-07-2)	Eyes
2-butoxyethylacetate (112-07-2)	Hemato system
2-butoxyethylacetate (112-07-2)	Kidneys
2-butoxyethylacetate (112-07-2)	Liver
2-butoxyethylacetate (112-07-2)	Lymphoid system
2-butoxyethylacetate (112-07-2)	Respiratory system
2-butoxyethylacetate (112-07-2)	Skin
Cyclohexanone (108-94-1)	Central Nervous System
Cyclohexanone (108-94-1)	Eyes
Cyclohexanone (108-94-1)	Kidneys
Cyclohexanone (108-94-1)	Liver
Cyclohexanone (108-94-1)	Respiratory system
Cyclohexanone (108-94-1)	Skin

12. Ecological Information

Ecotoxicity No information on ecology is available.

Aquatic toxicity No data available for this product.

Persistence and degradability Not available.

13. Disposal Considerations

Waste codes

US RCRA Hazardous Waste U List: Reference

Cyclohexanone (108-94-1)	U057

Disposal instructions Dispose of in compliance with federal, state, and local regulations. Do not allow this material to drain into sewers/water supplies.

14. Transport Information

IATA

Not regulated as dangerous goods.

General not regulated

15. Regulatory Information

US federal regulations

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

2-butoxyethylacetate (112-07-2)	1.0 % N230

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

2-butoxyethylacetate (112-07-2)	N230 Listed.

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes

State regulations

US - New Jersey Community RTK (EHS Survey): Listed substance

2-butoxyethylacetate (112-07-2)	Substance no. 3138

US - New Jersey Community RTK (EHS Survey): Reportable threshold

2-butoxyethylacetate (112-07-2)	500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

2-butoxyethylacetate (112-07-2)	Listed.
Cyclohexanone (108-94-1)	Listed.

16. Other Information

HMIS® ratings	Health: 2 Flammability: 2 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 2 Flammability: 2 Instability: 0
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Explanation of abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation
EPCRA	Emergency Planning and Community Right-to-Know Act (aka SARA)
IARC	International Agency for Research on Cancer
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
REC	Recommended
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act of 1986
STEL	Short-Term Exposure Limit
TCLP	Toxicity Characteristics Leaching Procedure
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
VOC	Volatile Organic Compounds
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